
MTEL®-Flex Early Childhood—Mathematics Concepts and Processes (Objective 0011)

Objective 0011: Prepare an organized, well-developed analysis on a topic related to the development of concepts and processes related to mathematics.

Objective 0011 includes the following descriptive statements:

1. Analyze, interpret, and discuss an individual child’s work sample in mathematics.
2. Select appropriate examples from the child’s work sample that indicate strengths and needs related to mathematics.
3. Select and describe developmentally appropriate strategies, activities, and instruction to promote the child’s identified strengths and address the child’s identified needs in mathematics.

MTEL®-Flex enables you to demonstrate your functional content knowledge of the MTEL Early Childhood test objectives through submitting materials on a scenario that you develop. **You must develop a scenario related to the development of concepts and processes related to mathematics. Your analysis of this scenario must address the three descriptive statements listed above.**

Your submission will be evaluated on the extent to which you demonstrate the **depth of your subject matter knowledge** of MTEL-Flex Early Childhood Objective 0011.

MTEL-Flex Early Childhood involves answering 4 prompts and writing an analysis in which you demonstrate your knowledge of the content assessed by the test objective and further elaborated by the three descriptive statements. The analysis you prepare should relate to your stated scenario.

Your responses to the first 4 prompts should be **no more than 2 single-spaced pages** and your written analysis should be **no more than 3 single-spaced pages**. This instructions page does not count toward your page limits.

This template contains a [Prompt Section](#) and a [Written Analysis Section](#). Once both sections are completed, upload the template to the Pearson ePortfolio System.

For more information about the MTEL-Flex Assessment, preparing your materials for submission, and scoring of your submission, refer to the MTEL-Flex Assessment Handbook.

Prompt Section

Respond to the prompts below (**no more than 2 pages, including prompts**) by typing your responses in Arial 11-point, single-spaced font, within the brackets following each prompt. Do not delete or alter the prompts. Only the two pages will be evaluated. The previous page of instructions and the written analysis that follows do not count toward your page limit. Your submission cannot contain hyperlinks to any materials.

1. Indicate one mathematics domain from the list below. Your analysis will need to focus on the mathematics content you select.

- Counting and Cardinality
- Operations and Algebraic Thinking
- Number and Operations in Base 10
- Measurement and Data
- Geometry

[Counting and Cardinality]

2. Indicate one or more content standards from within the same cluster heading for grades Pre-Kindergarten–2 from the [Massachusetts Mathematics Curriculum Framework – 2017](#) (pp. 22–36) that addresses your selected mathematics domain. Your analysis will need to focus on the content standard(s) selected.

[Count many kinds of concrete objects and actions up to ten, using one-to-one correspondence, and accurately count as many as seven things in a scattered configuration. Recognize the “one more,” “one less” patterns.]

3. Write a 3- to 5-sentence scenario for early childhood students (Pre-Kindergarten through Grade 2) that describes an activity related to the domain and content standards selected.

The scenario you describe should enable you to do the following in the Written Analysis Section of this template:

- analyze, interpret, and discuss a student’s work sample
- identify the student’s strengths and areas for improvement in the content standard
- describe how the activity helps the student learn the mathematics content
- demonstrate the depth of your Early Childhood mathematics subject matter knowledge

[Children in a prekindergarten class will work on counting a sheet with cartoon images of caterpillar bodies made of circles. The students will work to count each caterpillar’s circular body segments while using stickers to keep track of which segments have already been counted. Each student will indicate their count of the body segments by circling one of several numerals under each caterpillar on their worksheets. An extension involving drawing a new caterpillar to match a given numeral will be given to students who are ready for additional challenges.]

4. List any additional sources used to prepare your submission.

[*Quick Reference Guide: Standards for Mathematical Practice: Pre-Kindergarten through Grade 2*; available on the DESE website]

Written Analysis Section

Type your analysis (**no more than 3 pages, including the prompt**) in Arial 11-point, single-spaced font, within the brackets following the prompt. If appropriate, you may include tables, charts, graphs, or other diagrams that you have prepared by inserting them into your analysis. However, the total length of your analysis, including any graphic elements, may not exceed 3 pages. The previous pages of instructions and prompts do not count toward your page limit. Your submission cannot contain hyperlinks to any materials.

Prepare an organized, well-developed analysis of the scenario that you described in Prompt #3 in the Prompt Section to demonstrate the depth of your subject matter knowledge. In your analysis, make sure to do the following:

1. Develop an individual student's work sample that aligns with the scenario described in the Prompt Section and show evidence of the student's strengths and areas for improvement in the content standard.
2. Analyze, interpret, and discuss the work sample, using evidence from the work sample to describe the student's strengths and areas for improvement.
3. Select and describe developmentally appropriate strategies, activities, and instruction to promote the student's identified strengths and address the student's identified needs in mathematics.

[Analysis text here; can go up to page 3 of 3....]